National Institutes of Health

Office of Technology Transfer

National Institutes of Health (NIH) Office of Technology Transfer

6011 Executive Boulevard, Suite 325 • Rockville MD 20852-3804

Phone: 301-496-7057 • Website: www.ott.nih.gov

INTRODUCTION

NIH has an extensive intellectual property portfolio of early-stage technologies[1] and also invests substantially in their development. Roughly 10 percent of the annual NIH budget is dedicated to intramural research and development activities that results in medical inventions in the areas of medical devices, software, vaccines, diagnostics, therapeutics, and reagents. Commercial partners are needed to ensure that the long hours at the lab bench and the public investment in the development of these inventions pay off in the end in marketed products.

NIH believes that innovative companies can play a significant role in the future development of leading-edge research. While the increasingly consolidated pharmaceutical industry remains a steady customer of research reagents and clinical collaborations with NIH, the more exciting therapeutic developments are increasing coming from NIH licenses signed with small and medium-sized life science companies early in their growth phase.

NIH affords creative treatment to small firms and tries to provide IP agreements that facilitate new areas of product development based upon NIH research to attract and help companies in the early-stages of their development. For example, financially-burdened smaller companies can benefit from flexibility on patent costs and license execution fees in license agreements. Of particular note for venture-backed firms is that companies do not give up equity or management control nor are their future development or marketing rights compromised by signing NIH license agreements. Finally, once the product is in development, NIH has the capability to **assist with clinical trials**, conduct **research collaborations**, and eventually purchase the product as a customer.

We have collected some nanotechnologies your company might be interested in for further discussion with our licensing managers.

Once you have picked the technology of interest, we urge you to apply for a License. A copy of the License Application template can be found at the NIH OTT website at:
http://www.ott.nih.gov/forms_model_agreements/forms_model_agreements.aspx

[1] *The NIH Office of Technology Transfer cannot guarantee that the listed technologies are still available for licensing. Please contact the Licensing and Patenting Manager (listed under each technology) for the current status and for other complementary technologies.*

RNA/DNA/Amino Acid Nanoparticles

Reference Number	Title	Patent Status
E-256-2006	Self-Assembling Nanoparticles Composed of Transmembrane Peptides and Their Application for Specific Intra-Tumor Delivery of Anti-cancer Drugs	US application; filled 2009
E-059-2009	RNA Nanoparticles and Methods of Use	PCT application; filled 2010
E-063-2008	Nanoparticles for Imaging and Treatment of Brain Tumors	PCT application; filled 2009
E-003-2007	Engineered Human Antibody Constant Domains (Nanoantibodies) as Scaffolds for Binders	US application; filled 2010

Metal Containing Nanoparticles

Reference Number	Title	Patent Status
E-157-2007	Nanoparticles for Imaging: Targeted Nanoparticles that can be Imaged through Magnetic Resonance, Optical, and Radioisotope Imaging	PCT application; filed 2008

Nanotubes

Reference Number	Title	Patent Status
E-233-2006	Design of Multi-Functional RNA Nanoparticles and Nanotubes	PCT application; filled 2007
E-091-2004	Ultrasonic Waves with Nanovessels or Tethered Nanotube/Monoclonal Antibody composites for Cancer Therapy	US application; filled 2004
E-090-2004	Radio-Activated Boron-Nitride Nanotube-Antibody Conjugates for Cancer Therapy and Diagnostics	US application; filled 2004

Carbohydrate-encased nanoparticles: (Metals, Proteins, and Methods of Use)

Reference Number	Title	Patent Status
Metal Nanoparticles		
E-001-2005	Carbohydrate-Encapsulated Gold Nanoparticles as Novel Anti-Metastatic Agents	US application; filled 2007
E-133-2004	Carbohydrate-Encapsulated Quantum Dots for Cell-Specific Biological Imaging	PCT application; filled 2005
Protein Nanoparticles		
E-254-2007	Mucin Binding Lectin Imaging Agents for Colonic Polyp Imaging	US application; filled 2008
Methods of Use		
E-016-2008	Modified Sugar Substrates and Methods of Use	
E-279-2007	Alpha 1-3N-Acetylgalactosaminyltransferases with Altered Donor and Acceptor Specificities, Compositions and Methods of Use: Development of Pharmaceutical Agents and Improved Vaccines	PCT application; filled 2007
E-280-2007	Beta 1,4-Galactosyltransferases with Altered Donor and Acceptor Specificities, Compositions and Methods of Use: Development of Pharmaceuticals and Improved Vaccines	PCT application; filled 2007

Devices

Reference Number	Title	Patent Status
E-307-2002	Contiguous Capillary Separation and Electrospray Ionization Sources and Analytical Devices	Issued 2009 Patent No. 7,544,932
E-195-2005	Nanoprobes for Detection or Modification of Molecules	US application; filled 2005
E-243-2005	Susceptibility-Matched Multiwell Plates for High-Throughput Screening by Magnetic Resonance Imaging and Nuclear magnetic Resonance Spectroscopy	US application; filled 2008